

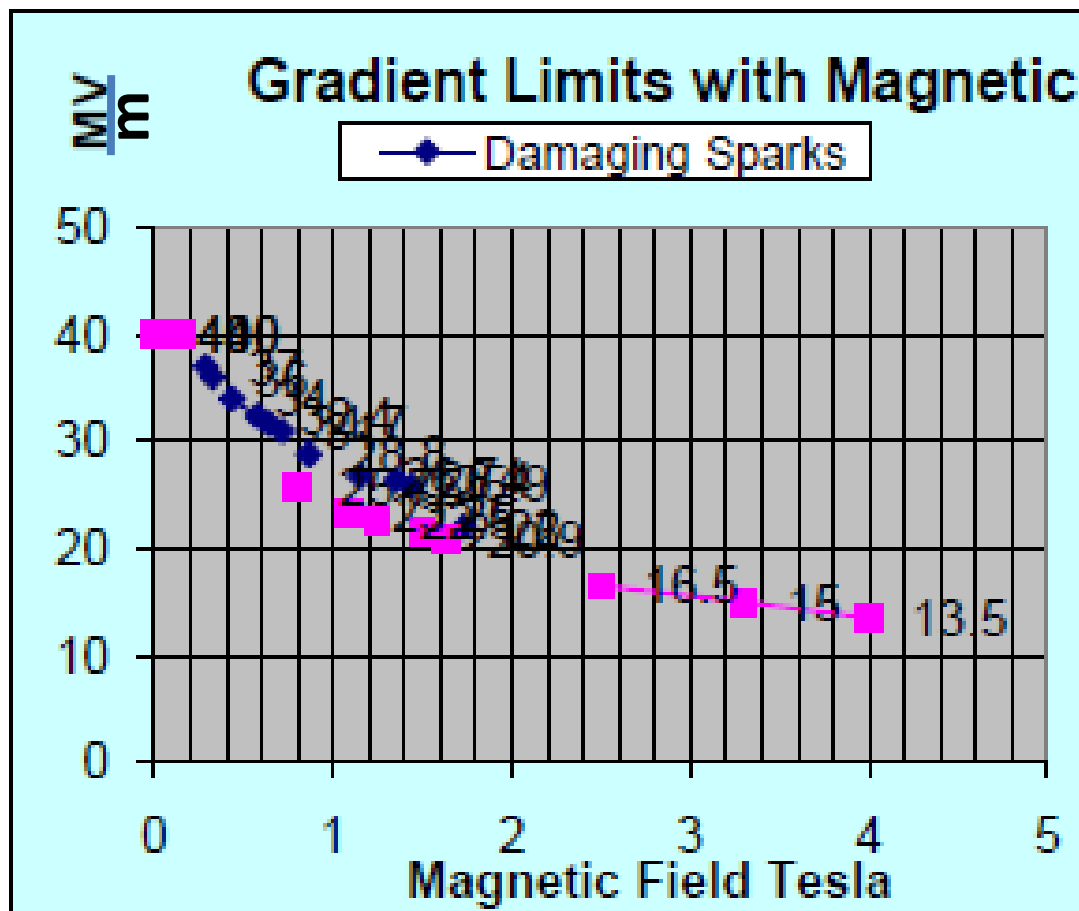
Al Moretti and Zubao Qian

Box Cavity Results and Plans

Friday Map Talk; 07/30/2010

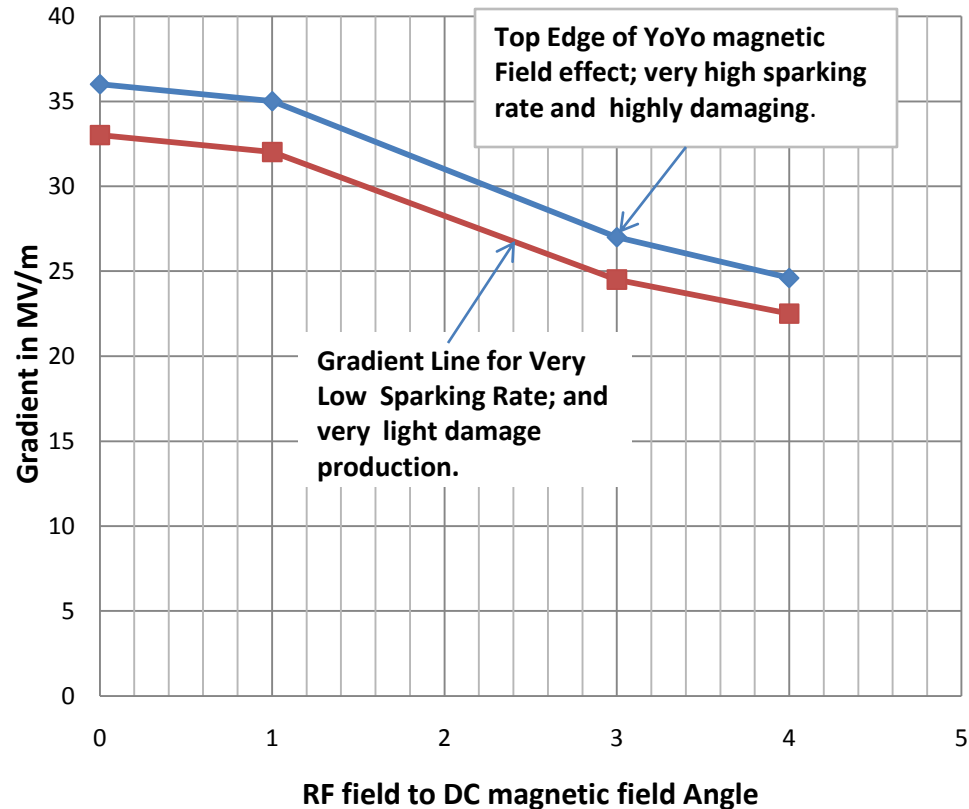
Future Plans

- We have completed the Box cavity Study (magnetic field insulation effect) at 0, 1, 3 and 4 Degrees at 3. Tesla. Before each run we commissioned the cavity upto 33 MV/m at 0. T. except for the first 0 Degree run commissioned to 23 MV/m.
- Next, we are planning on going to -1 Degree.
- After this study, we are going back to 0 degrees and run the gradient up to 50 MV/m if possible with a very low sparking rate ($< 1/100,000$) at 0. T. Then continue the study at 3. T.
- This last run to be continue by reversing the solenoidal magnetic field direction.
- The plans are then to install the LBL Pill box cavity and begin the study with new Be button shape. It is smaller in diameter and more peaked to give a enhancement factor of 3.



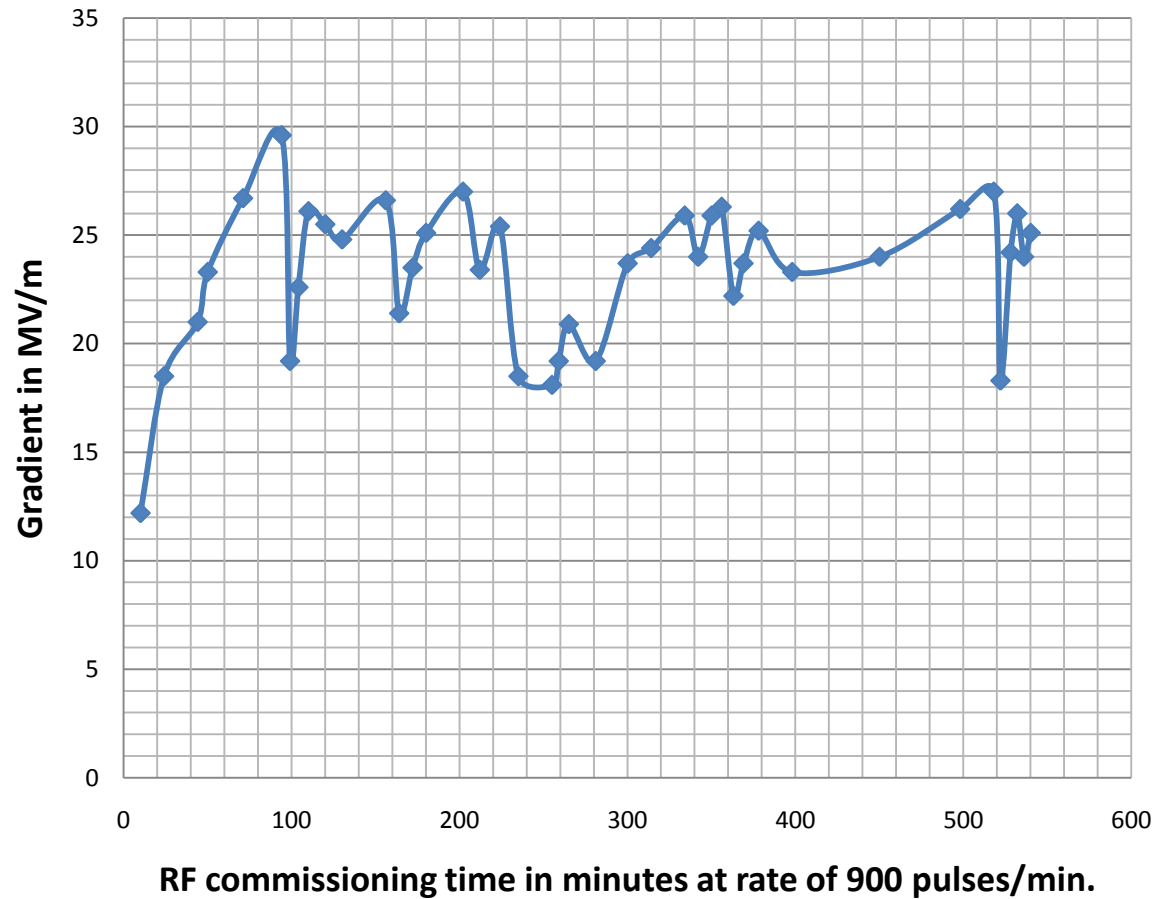
LBL Pill Box Cavity Vacuum Gradient with Flat and Curved Windows

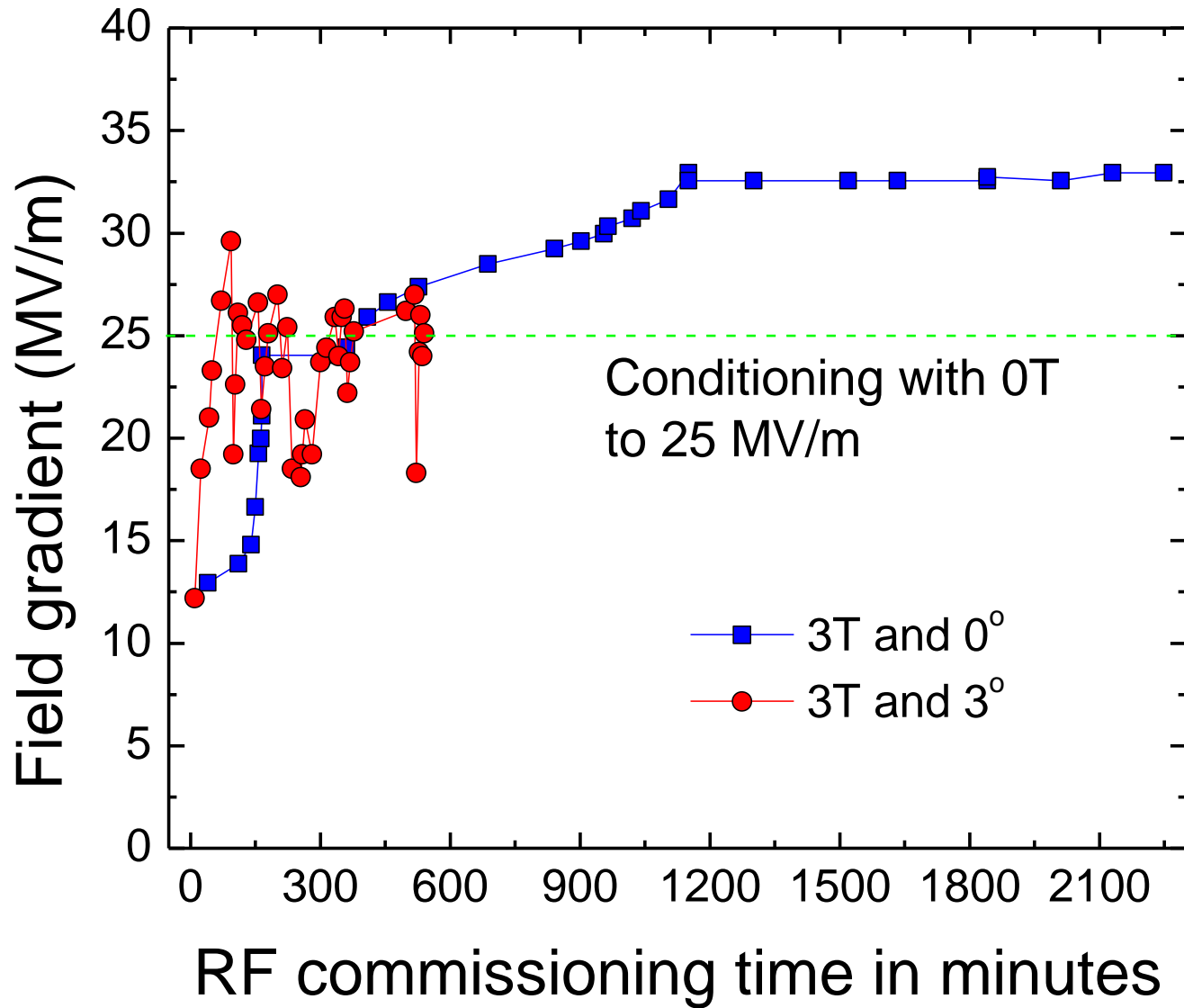
Box Cavity Gradient vs. Magnetic Angle

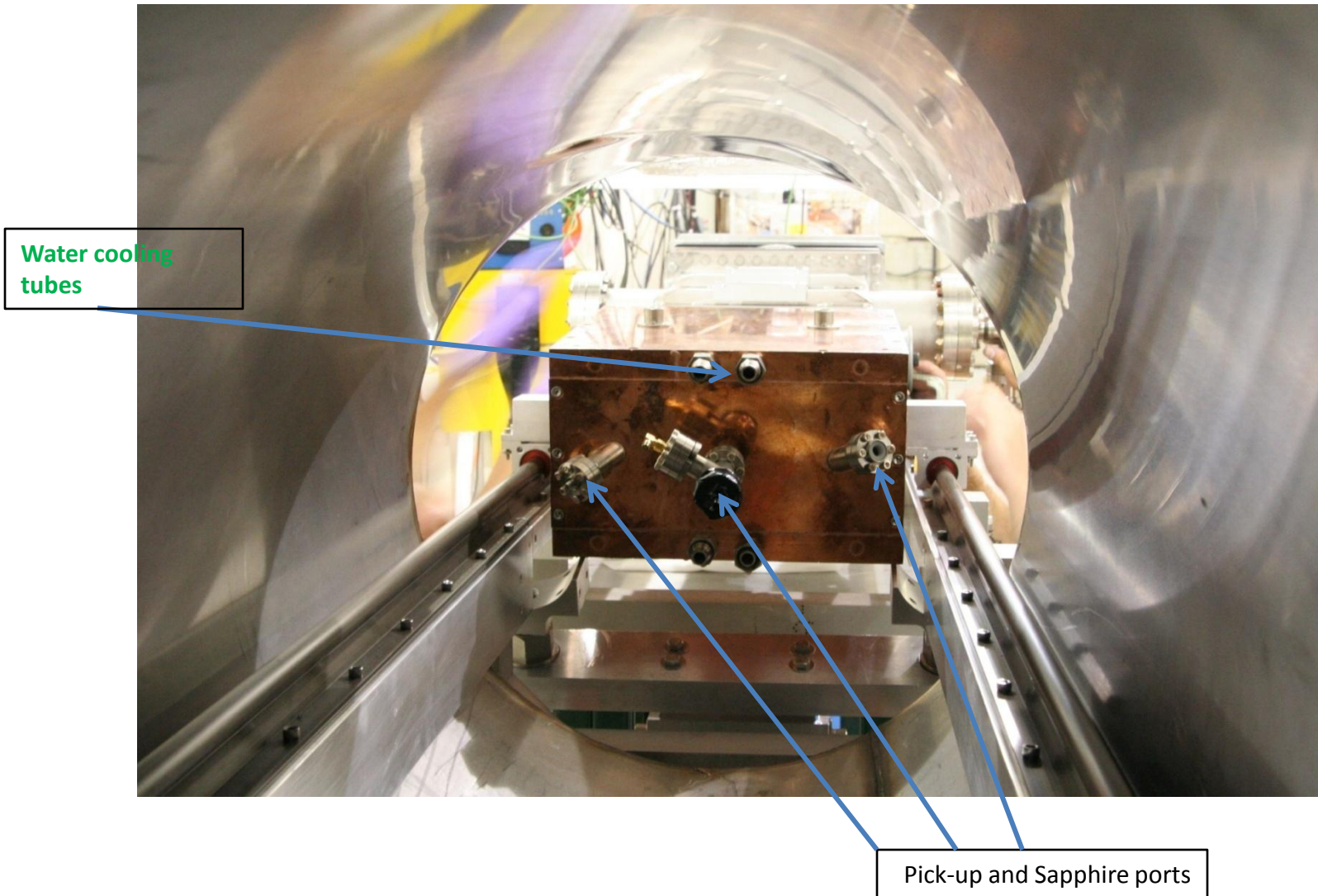


**Term “Sparking” is used loosely above;
disruption maybe better term.**

Breakdown History 3 Degrees and 3T









Ceramic window for Vacuum

Calibration Adapter WG to type N

Vacuum Pump